Evaluation Report

ACCIDENTAL OFF-DUTY DEATHS IN DOD

Report Number 98-153 June 15, 1998

Office of the Inspector General
Department of Defense

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Acronyms

GAO	General Accounting Office

INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
400 ARMY NAVY DRIVE
ARLINGTON, VIRGINIA 22202

June 15, 1998

MEMORANDUM FOR DEPUTY UNDER SECRETARY OF DEFENSE
(ENVIRONMENTAL SECURITY)

SUBJECT: Evaluation Report on Accidental Off-Duty Deaths in DoD
(Report No. 98-153)

We are providing this evaluation report for your information and use. We performed the evaluation in response to a request to the Secretary of Defense from Senator John F. Kerry. We considered management comments on a draft of this report in preparing the final report.

Comments on the draft of this report conformed to the requirements of DoD Directive 7650.3 and left no unresolved issues. Therefore, no additional comments are required.

We appreciate the courtesies extended to the evaluation staff. Questions on the evaluation should be directed to Mr. Michael A. Joseph, email <mjoseph@dodig.osd.mil>, or Mr. Timothy J. Tonkovic, email <ttonkovic@dodig.osd.mil>, at (757) 766-2703. See Appendix G for the report distribution. The evaluation team members are listed inside the back cover.

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Office of the Inspector General, DoD

Report No. 98-153 **June 15, 1998**
(Project No. 7LF-5053)

Accidental Off-Duty Deaths in DoD

Executive Summary

Introduction. In June 1997, the *Boston Globe* reported that DoD experienced more than 29,000 deaths in other than combat or terrorist incidents since 1979. As a result of the articles, Senator John F. Kerry requested that DoD consider the implication of the articles on DoD. The Secretary of Defense tasked the Inspector General, DoD, to begin an evaluation of deaths in DoD, with the exception of those resulting from aviation accidents, combat, or terrorism.

In 1997, the Washington Headquarters Services reported that about 30,000 active duty personnel died from nonhostile and nonterrorist events during the 17-year period that ended on September 30, 1996. The total included about 18,200 deaths from accidents, 5,500 deaths from illness, 4,100 deaths from suicide, 1,700 homicides, and 500 deaths from undetermined causes.

Our evaluation initially focused on 6,790 of the 18,200 accidental deaths. We did not evaluate accidental deaths that occurred prior to 1988 because detailed records were not complete or readily accessible. During our evaluation, we learned that the General Accounting Office was performing a similar review of accidental deaths that occurred during on-duty hours. To avoid duplication, we concentrated on the 4,698 accidental deaths that occurred during off-duty hours from 1988 through 1996. The General Accounting Office plans to issue its report addressing accidental on-duty deaths in the summer of 1998.

Evaluation Objectives. The primary evaluation objective was to determine whether DoD safety programs are effective in reducing off-duty noncombatant deaths.

Evaluation Results. The accidental off-duty death rate in DoD per 100,000 individuals declined 31 percent from 1988 through 1996. The motor vehicle death rate, the largest category of accidental off-duty deaths, declined by 34 percent for the same period. While DoD has made progress in reducing the off-duty accidental death rate, the rate plateaued from 1993 through 1996. For details of the evaluation results, see Part I.

Summary of Recommendations. We recommend that the Deputy Under Secretary of Defense (Environmental Security) prepare a statement for signature by the Secretary of Defense that emphasizes the DoD commitment to safety, restates the DoD goal of zero accidents, and places a renewed emphasis on developing other approaches that will contribute to a reduced accidental death rate.

Management Comments. The Deputy Under Secretary of Defense (Environmental Security) concurred with the recommendation to prepare a statement for signature by the Secretary of Defense. The Deputy Under Secretary stated that the Secretary of Defense statement should set the tone for DoD accident prevention efforts well into the future. See Part I for a summary of management comments and Part III for the complete text of management comments.

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Part I - Evaluation Results

Introduction

In June 1997, the *Boston Globe* reported that more than 29,000 active duty personnel died from nonhostile and nonterrorist events from late 1979 through 1996. As a result of the articles, Senator John F. Kerry requested that DoD consider the *Boston Globe* articles and their implications for the active duty force. The Secretary of Defense tasked the Inspector General, DoD, to complete an evaluation of deaths in DoD, with the exception of those resulting from aviation accidents, combat, or terrorism.

On-Duty Accidents. Prior to the start of our evaluation, we learned that the General Accounting Office (GAO) was reviewing Class A and Class B on-duty mishaps that involved an injury or a death. DoD classifies Class A mishaps as accidents that occur when reportable damage is $1 million or more; an aircraft, missile, or spacecraft is destroyed; or the accident results in a permanent total disability or death. Class B mishaps occur when reportable damage is greater than $200,000, but less than $1 million or when an injury results in a permanent partial disability. Throughout this report, we use the term accident to refer to unplanned events or mishaps that result in a death.

The term on duty refers to DoD personnel who are physically present at any location where they are performing officially assigned work. The term includes all activities incident to normal work, such as lunch and rest breaks. All compulsory physical training and activities aboard vessels are considered to be on duty. GAO plans to issue its report on deaths related to on-duty accidents in the summer of 1998.

Off-Duty Accidents. Because GAO plans to report on on-duty accidents, we concentrated our efforts on accidental deaths that occurred during off-duty hours. Off-duty accidents include events when DoD personnel are not in a duty status, have departed their official duty station, are in a leave status, are traveling before or after official duties, or are participating in voluntary sports.

Accident Related Mortality. Off-duty accidental deaths are caused by events such as boating and motor vehicle accidents, drownings, falls, recreational and sports related accidents, and weapon related accidents. Socioeconomic status and access to medical care are also important contributors to accidental death rates; however, the impact is difficult to quantify.

Accidental DoD Deaths. From October 1, 1979, through September 30, 1996, there were 30,469 DoD active duty deaths worldwide. During that period, 558 deaths were from hostilities and terrorist incidents. Of the remaining 29,911 nonhostile or nonterrorist active duty deaths, 11,732 (39 percent) deaths resulted from homicide, illness, or suicide. Of the 18,179 accidental deaths, 11,216 occurred from FY 1980 through FY 1987. Table 1 shows that 6,963 accidental deaths occurred from FY 1988 through FY 1996. See Appendix C for additional information on DoD deaths.

Table 1. DoD Military Personnel Deaths

Total Deaths		30,469
Less: Hostile and terrorist deaths		558
Total nonhostile and nonterrorist deaths		**29,911**
Less: Deaths other than accidents		
Homicide	1,693	
Illness	5,497	
Suicide	4,090	
Undetermined	452	11,732
Total accidental deaths (FY 1980 through FY 1996)		**18,179**
Accidental deaths - FY 1980 through FY 1987		11,216
Accidental deaths - FY 1988 through FY 1996		6,963

Incomplete Information. Data prior to FY 1988 was incomplete or unreliable because casualty records had been destroyed, lost, or transferred to permanent record holding locations. Additionally, prior to FY 1988, computerized data bases did not always capture complete information regarding on-duty and off-duty accidental DoD deaths. Therefore, we reviewed information related to off-duty accidental deaths from FY 1988 through FY 1996.

We converted FY 1988 through FY 1996 accidental death information to calendar year information in order to compare DoD off-duty accident information to the civilian sector. For this report, the term civilian refers to all non-military individuals, including those employed by DoD. We considered a 9-year span sufficient for identifying trends relating to off-duty accidental death.

After our conversion, there were 6,790 accidental deaths in DoD from 1988 through 1996. Of the 6,790 deaths, 2,092 were the result of on-duty accidents, and the remaining 4,698 were considered to be off-duty accidents. GAO will report on the on-duty accidental deaths. Table 2 shows the deaths that resulted from on-duty and off-duty accidents and that occurred from 1988 through 1996.

Table 2. Total Accidental Deaths From 1988 Through 1996

On-duty deaths	
Aviation	984
Ground	1,108
Subtotal	**2,092**
Off-duty deaths	4,698
Total	**6,790**

Objectives

The primary evaluation objective was to determine whether DoD safety programs are effective in reducing off-duty noncombat deaths. Another announced objective was to review the adequacy of the management control program applicable to the primary evaluation objective. We did not review the management control program because the majority of information gathered during the evaluation was developed and prepared by numerous Military Department sources outside the purview of the Service safety centers. Additionally, some of the information used in the evaluation was developed by Federal Government departments other than DoD.

See Appendix A for a discussion of the scope and methodology. See Appendix B for a summary of prior coverage related to the evaluation objectives.

Off-Duty Accidental Deaths

The accidental off-duty death rate in DoD declined 31 percent per 100,000 individuals from 1988 through 1996. The motor vehicle accidental death rate per 100,000 individuals, the largest category of accidental off-duty deaths in DoD, declined 34 percent for the same period. Although we could not quantify the relationship of safety programs to the decline, we believe that the Services' safety initiatives were a contributing factor in the reduced death rate. While DoD has made progress in reducing the accidental off-duty death rate, the rate plateaued from 1993 through 1996.

Criteria

DoD Instruction 5505.10, "Investigation of Noncombatant Fatalities of Active Duty Members of the Armed Forces," January 31, 1996, requires investigation of noncombatant deaths of members of the Armed Forces not medically determined to be from natural causes. An Armed Forces medical examiner determines the cause of death to ensure there are no suspicious circumstances requiring criminal investigation.

DoD Instruction 1300.18, "Military Personnel Casualty Matter, Policies, and Procedures," December 27, 1991, establishes policies pertaining to DD Form 1300, "Report of Casualty," which provides the official record of death or missing status for a Service member. DD Form 1300 is used as a basis for paying monetary benefits, collecting casualty data, and closing active duty personnel files.

DoD Instruction 6055.7, "Mishap Investigation, Reporting, and Recordkeeping," April 10, 1989, provides guidance for investigating, reporting, and recordkeeping on accidents that result in DoD property damage or personnel injuries or deaths. The Instruction standardizes accident categories, classification criteria, and reporting formats and procedures.

DoD Instruction 6055.4, "Department of Defense Traffic Safety Program," November 22, 1994, provides guidance in administering a comprehensive DoD traffic safety program in order to reduce deaths, injuries, and property damage. The Instruction states that any military personnel under 26 years of age who possess a driver's license shall be given a minimum of 4 hours of classroom instruction in traffic safety designed to establish and reinforce a positive attitude toward driving. The Instruction also requires seat belts to be worn by both drivers and passengers of a motor vehicle on a DoD installation.

Background

DoD Safety Centers. The Army, the Navy, and the Air Force each operate a safety center and the Marine Corps operates a safety division. The safety centers and safety division develop safety-related education programs, operating policies, and regulatory guidance; manage Service accident prevention programs; and provide safety related technical assistance and evaluations to the Services. The safety centers and safety division gather information on accidents that result in death, loss of worktime injuries, permanent disability, or property damage. See Appendix D for a discussion of DoD safety centers and safety division.

Accidental Off-Duty Deaths

Accidental off-duty deaths declined from 37 deaths per 100,000 individuals in 1988 to 25.6 deaths (31 percent) per 100,000 individuals in 1996. During the same period, DoD experienced a 52 percent reduction in the number of total off-duty accidental deaths. Figure 1 shows the DoD death rates per 100,000 individuals and the number of actual DoD deaths that occurred from 1988 through 1996. In our opinion, Service safety awareness programs and other initiatives are factors that contributed to the reduced accidental death rate.

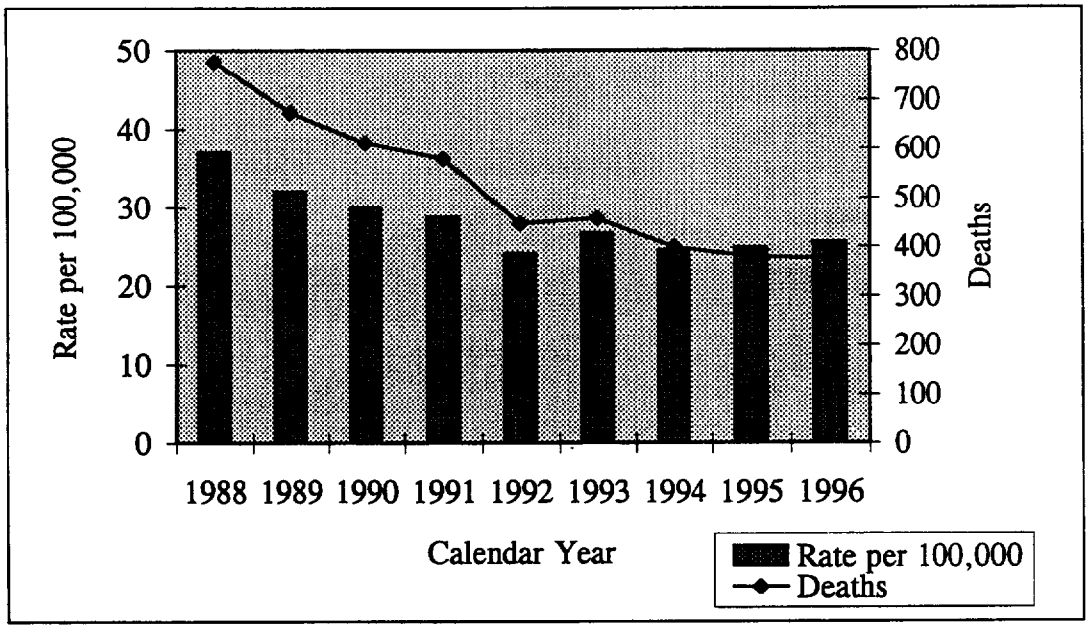

Figure 1. DoD Off-Duty Accidental Deaths and Rates per 100,000 Individuals From 1988 Through 1996

Motor vehicle accidents accounted for 3,788 of the 4,698 (81 percent) accidental off-duty deaths from 1988 through 1996. Motor vehicle deaths included drivers and passengers and anyone killed by a motor vehicle, such as a bicyclist, jogger, or pedestrian. Sports-related and recreational-related accidents were the second leading cause of death and accounted for about 9 percent of the 4,698 deaths. Figure 2 shows the relationship of motor vehicle deaths to other off-duty accidental deaths. Appendix E summarizes the off-duty deaths for the 9-year period.

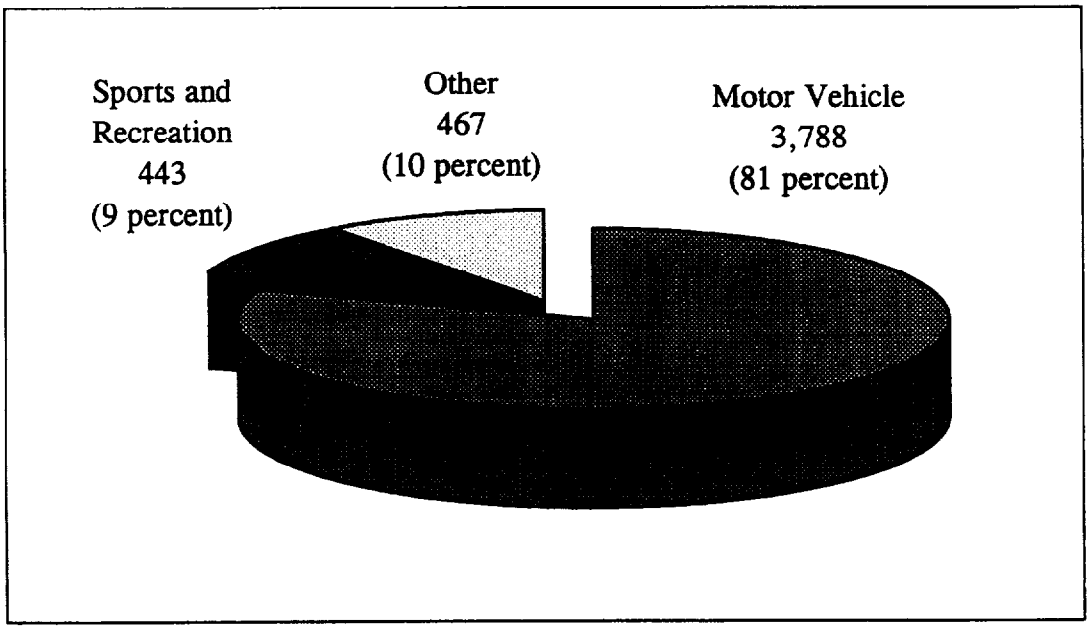

Figure 2. Off-Duty Accidental Deaths From 1988 Through 1996

Motor Vehicle Deaths

Accidental off-duty motor vehicle deaths per 100,000 individuals declined 34 percent from 1988 through 1996. Specifically, the deaths declined from 31.3 deaths per 100,000 in 1988 to 20.6 deaths per 100,000 individuals in 1996. The motor vehicle death rate per 100,000 individuals was less for DoD than for the rest of the United States when civilian motor vehicle fatalities were weighted by age and gender to match the DoD population. See Appendix A for a discussion of the methodology used to standardize the civilian population. During that same period, DoD experienced a 54 percent reduction in the total number of off-duty motor vehicle deaths. Figure 3 shows the DoD off-duty motor vehicle death rates per 100,000 individuals and the number of actual motor vehicle deaths that occurred from 1988 through 1996.

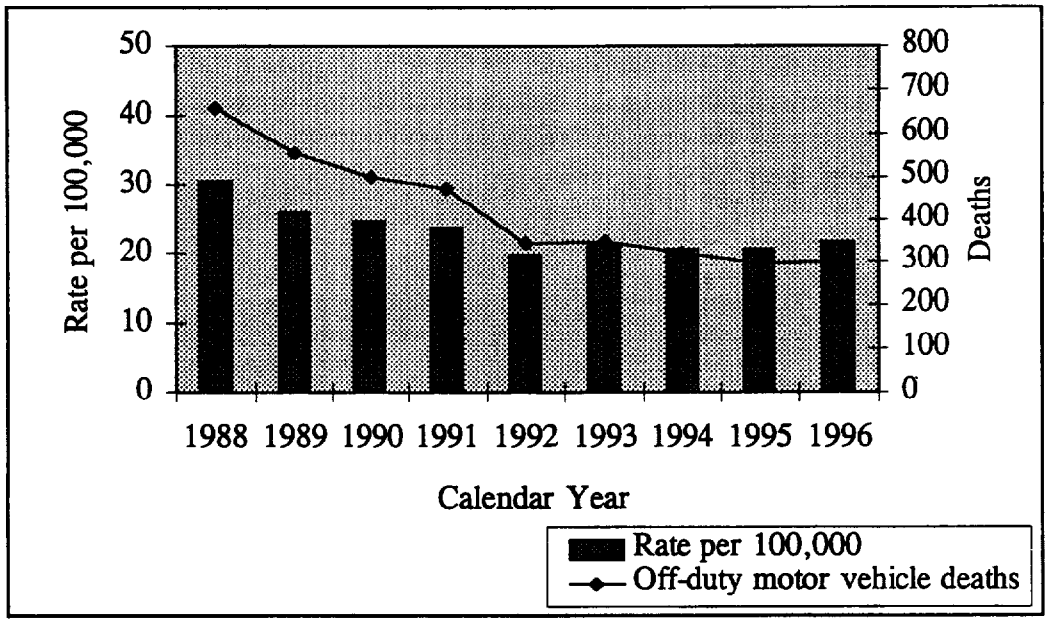

Figure 3. DoD Off-Duty Motor Vehicle Deaths and Rates per 100,000 Individuals From 1988 Through 1996

Comparison of Civilian and DoD Traffic Deaths. Civilian and DoD motor vehicle deaths declined from 1988 through 1996; however, the DoD rates are significantly lower than the civilian sector weighted rates. We compared DoD motor vehicle death statistics to civilian statistics over a 9-year time frame. We limited our comparison of DoD and civilian data to 9 years because some DoD information prior to 1988 could not be stratified by age and gender. We further limited our comparison to the 17-year old through 40-year old age group because about 98 percent of the DoD accidental motor vehicle deaths occur within that age group. Additionally, the number of DoD personnel in that age group has remained at a relatively constant 93 percent.

Although our evaluation focused on off-duty accidents, for comparison purposes with the civilian sector, we included all DoD on-duty and off-duty accidental motor vehicle deaths that occurred in the continental United States, as well as overseas locations. We included all DoD motor vehicle deaths to ensure a fair and accurate comparison was made of all civilian motor vehicle accidents. For the review period, we added 479 on-duty land vehicle deaths to the 3,788 off-duty motor vehicle deaths.

On-duty land vehicle accidental deaths involved government or privately-owned motor vehicles primarily designed for over-the-highway operations and equipment, such as armored carriers and tracked or half-tracked vehicles, designed primarily for off-the-highway operation. We also included off-road

recreational vehicle deaths. We calculated civilian accident rates using information on motor vehicle deaths that involved a motor vehicle traveling on a roadway customarily open to the public in the United States. Figure 4 compares the DoD worldwide on-duty and off-duty death rate to the civilian sector weighted rates from 1988 through 1996.

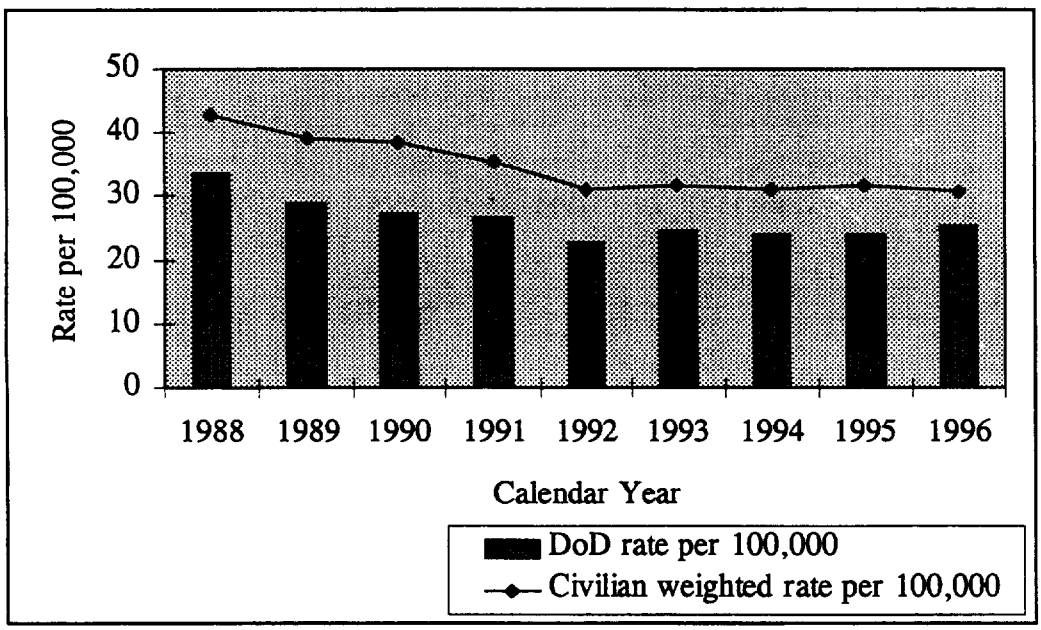

Figure 4. Motor Vehicle Death Rates per 100,000 Individuals From 1988 Through 1996

See Appendix F for additional information on weighted civilian and actual DoD accidental death rates. While both civilian and DoD motor vehicle deaths have declined, DoD rates are significantly lower than the civilian sector weighted rates.

Safety Programs Within the Services

In our opinion, Service safety awareness programs have contributed to the significant decline in off-duty DoD deaths. DoD has realized for many years that the primary cause of death for active duty personnel are motor vehicle accidents. The Services have developed safety programs designed to increase the awareness of the risk of driving. Examples of current programs are discussed below.

Army. The Army has developed the "Automated Risk Assessment and Control Options Program For Privately Owned Vehicle Operations" and prepared an accompanying manual that allows individuals to identify and evaluate traffic risks and provides incentives for safe driving. The automated program uses a questionnaire to assist drivers in estimating their risk of having an accident, and making changes necessary to reduce the identified risks. Commanders and unit leaders also use the program to identify soldiers who are considered to be at risk for becoming involved in a motor vehicle accident.

Navy. One Navy program involves flying state police officers out to ships that are returning from extended deployments. Onboard the ships, the state police officers conduct briefings to remind sailors about the hazards of driving a motor vehicle. They also convey to shipboard personnel that driving skills may have eroded during extended deployments and that it will take a period of time before they return to their pre-deployment levels of proficiency.

Air Force. Air Force personnel transferred to a new duty station are provided instruction on local driving conditions. They are made aware of driving in their new surroundings and the areas where most traffic accidents occur. They are also shown any driving habits or conditions that are peculiar to their new duty station.

Marine Corps. Marine Corps installations with a population of more than 500 military and civilian personnel are required to have a safe driving council. The purpose of the council is to establish and maintain an effective traffic safety program, evaluate and recommend policies concerning motor vehicles, and identify and correct traffic accident trends through investigating, reporting, and analyzing.

Safety Center Initiatives. Representatives from the safety centers and safety division regularly meet to share information on different motor vehicle safety programs and to share ideas that could result in reduced motor vehicle death rates. DoD also established a traffic safety working group that serves as the technical advisor for all aspects of traffic safety in DoD. The working group monitors accident rates, interfaces with other DoD and Federal Government programs, and assists the Services with technical and policy issues relating to motor vehicle safety.

Other Safety Programs. In addition to traffic safety programs, the Services have other safety programs geared to Service members' off-duty time. One of the safety programs starts Memorial Day weekend and runs through Labor Day weekend. Summertime is traditionally a popular time for DoD personnel to travel and is usually a time of the year when increased numbers of personnel participate in outdoor recreational activities. In addition to motor vehicle

safety, the summer safety program promotes safety related to boating, camping, hiking, and swimming. Similar safety programs are developed for all the major holidays in DoD.

Safety Publications

Military safety center publications are another method used to convey safety to DoD personnel. The publications contain a wide variety of safety related articles and include statistical data and helpful safety hints. The safety centers publish about 1.4 million copies of 11 different periodic publications that are mailed to units throughout the world. In addition to the safety centers' publications, magazines; newspapers; other bulletins; and pamphlets that contain safety related articles are published by various major commands, installations, organizations, and units.

Risk Management Program

In 1987, the Army introduced a risk management program. The concept of the program has been recognized by the other Services since 1994. The program is essentially a five-step process that is usable at any time, at any place, by anyone. The five steps in evaluating the safety of a program are: identify hazards, assess the hazards, develop controls and make risk decisions, implement controls, and supervise and evaluate the results. One of the programs in the Army's overall risk management program is its "Automated Risk Assessment and Control Options Program For Privately Owned Vehicle Operations."

In its "Report of the Task Force on Aviation Safety," February 1997, the Defense Science Board reported that human error was present in over 70 percent of all aviation accidents and that risk management will identify hazards and minimize the chance of underestimating the risk, or overestimating an individual's ability to cope. Although the causes of off-duty motor vehicle accidents were not available, the National Highway Traffic Safety Administration has reported that human error, such as driving too fast for conditions, failure to stay in the proper lane, fatigue, and inattention, were related factors for fatal accidents.

In our opinion, the risk management process of identifying and controlling hazards is applicable to both off-duty activities and on-duty activities. A key factor in a successful risk management program is that all levels of personnel

are involved in the identification of hazards, the assessments of risks, the decisions and implementations of risk controls, and the evaluation of those controls.

Continued Emphasis of Safety Programs

While we recognize that DoD off-duty accidental death rates declined from 1988 through 1996, the decline plateaued from 1993 to 1996. The safety of DoD personnel, both on duty and off duty, is a fundamental component of mission readiness. DoD safety programs are intended to eliminate or minimize events that can impact mission readiness and the ability of DoD Components to carry out their mission. The "FY 1999 to FY 2003 Defense Planning Guidance," July 2, 1997, establishes a near term goal of zero Class A accidents with the ultimate goal of zero total accidents. The goals of the Defense Planning Guidance and the plateau in the decline of accidental death rates require a continued senior level emphasis on existing safety programs and on other approaches that may be successful in reducing accidental deaths.

Recommendation and Management Comments

We recommend that the Deputy Under Secretary of Defense (Environmental Security) prepare a statement for signature by the Secretary of Defense that emphasizes the DoD commitment to safety. The statement should discuss the role of leadership and teamwork in achieving the DoD goal of zero total accidents and should emphasize the development of other initiatives that could contribute to lowering the DoD accidental death rate.

Management Comments. The Deputy Under Secretary of Defense (Environmental Security) concurred, stating that she is preparing and coordinating a Department-wide statement for signature by the Secretary of Defense.

Part II - Additional Information

Appendix A. Evaluation Process

Scope

Work Performed. We obtained causes and statistics for DoD deaths from the Services and the Washington Headquarters Services, Directorate for Information Operations and Reports. We also interviewed personnel involved with safety related programs and reviewed policies, procedures, and programs at the Office of the Secretary of Defense, the Military Departments, and the safety centers. Additionally, we obtained civilian information from the Department of Labor, Bureau of Labor Statistics; the Department of Transportation, National Highway Traffic Safety Administration; and the Department of Commerce, Bureau of Census. Information included civilian traffic death statistics by calendar year, that was separated according to age and gender. We did not attempt to collect data on motor vehicle death rates by driving record, driving license status, educational level, ethnic background, family or marital status, or total miles driven because the data elements were not always available in the civilian sector or DoD.

Limitations to Evaluation Scope. We did not evaluate the accuracy of data from sources inside or outside DoD. Specifically, we did not evaluate the information used in DoD accidental death compilations because the information was prepared at numerous locations throughout DoD. We also did not review any of the information used to prepare accidental death statistics issued by the Department of Commerce, the Department of Labor, or the Department of Transportation.

DoD-wide Corporate Level Government Performance and Results Act Goals. In response to the Government Performance and Results Act, DoD has established 6 DoD-wide corporate level performance objectives and 14 goals for meeting those objectives. This report pertains to achievement of the following objective and goal.

> **Objective:** Maintain highly ready joint forces to perform the full spectrum of military activities. **Goal:** Maintain high military personnel and unit readiness. **(DoD-5.1)**

GAO High Risk Area. The GAO has identified several high risk areas in DoD. This report provides coverage of the Defense Infrastructure high risk area.

Evaluation Type, Dates and Standards. We performed this economy and efficiency evaluation from August 1997 through February 1998 in accordance with standards implemented by the Inspector General, DoD. Our scope was limited in that we did not include tests of management controls.

Methodology

Measure of Program Effectiveness. We assessed the effectiveness of DoD safety programs in reducing off-duty accidental deaths by analyzing the overall off-duty accidental death rates over time and by comparing the motor vehicle death rates per 100,000 individuals for DoD and civilian deaths from 1988 through 1996. We compared the DoD and civilian motor vehicle death rates for ages 17 through 40, because 98 percent of all DoD motor vehicle deaths occur in this range. We did not attempt to standardize DoD or civilian accidental death information for education, ethnic background, or marital status differences because DoD or civilian statistical data were not always available.

Population Differences. The DoD and civilian death rates are derived from populations with different distributions by age and gender. When each population is segmented by age and gender cells, comparisons between corresponding population cells highlight the differences between the population distributions. Therefore, any analysis between deaths or death rates from dissimilar populations distorts the conclusions obtained from a true comparison of similar populations.

Data Transformation. To compare DoD and civilian death rates, one population must be converted to a distribution similar to the other population. Therefore, civilian death and population numbers were converted to calculate the number of deaths that could be expected if the age and gender dispersion of the civilian population was similar to the DoD population. The following formula illustrates the conversion method that was applied to each cell.

> DoD population times (civilian fatalities divided by civilian population) = expected civilian fatalities under DoD population dispersion

The ratio of civilian deaths to the civilian population is the proportion of the overall population ending in deaths, by each age and gender cell. The expected civilian deaths are the anticipated number of deaths that would occur if civilian death rates were applied to the DoD population by each age and gender cell. The deaths from each cell were totaled by year, divided by the total DoD population for the year then multiplied by 100,000 to determine the expected civilian death rate per 100,000 individuals. Those calculations were independently performed for each year from 1988 through 1996. The purpose of independence is to evaluate the death rates as random variables. Statistical

techniques then can be used to measure potential differences in similar populations over time. Throughout this report, the converted civilian death rates have been referred to as weighted rates.

Paired Comparison Test. A paired comparison test was used to evaluate the difference in death rates between actual DoD death rates and expected civilian death rates by year, given civilian death rates applied to the DoD population described above. The test indicates whether a statistically significant difference exists between the death rates or whether the difference is so small that the rates are virtually the same for the 9-year period from 1988 through 1996. For this test, paired comparison differences are defined as expected civilian minus DoD death rates. A positive difference signifies a larger number of civilian fatalities.

Confidence Interval Statement. The values described below represent the estimated difference in fatality rates between DoD and expected civilian causalities, from the lower bound to the upper bound at 95 percent confidence. This difference is statistically significant if the entire range is on the same side of zero. With 95 percent confidence, the difference in fatality rates between DoD and civilian populations is at least 7.019 per 100,000 individuals, and possibly as much as 9.735 per 100,000 individuals. However, the point estimate of 8.377 is the most likely difference between the populations.

Use of Computer-Processed Data. We relied on computer-processed information contained in three data bases at the Services safety centers. We also relied on computer-processed worldwide casualty information contained in the data base at the Office of the Secretary of Defense, Washington Headquarters Services. We did not assess the reliability of the data because of the evaluation resources that would have been required to accomplish that effort.

Contacts During the Evaluation. We visited or contacted organizations within and outside DoD. Further details are available upon request.

Appendix B. Summary of Prior Coverage

General Accounting Office

General Accounting Office (GAO) Report No. NSIAD 94-82 (OSD Case No. 9589), "Military Training Deaths: Need to Ensure that Safety Lessons Are Learned and Implemented," May 5, 1994. The report states that the military is not doing enough to ensure that safety lessons from training-related deaths are learned and implemented. The Services did not investigate all training-related deaths because they characterized some training-related deaths as attributable to natural causes, even when training may have been a contributing factor. Additionally, when natural causes were not a factor, the Services did not always conduct both legal and safety investigations of fatal aviation and non-aviation training accidents. GAO reported that weaknesses existed in the Service's internal controls for conducting legal investigations of fatal training accidents, thereby increasing the risk of biased investigations and ineffective recommendation resolution. Also, none of the Services had a system for capturing and monitoring recommendations made in legal investigation reports. GAO recommended that the Services define what constitutes a "training related fatality." GAO also recommended that the Services amend and enforce existing regulations, ensure the independence of legal investigations, and track safety recommendations to ensure all appropriate actions have been taken. DoD agreed with the report premise that some training deaths should be treated as accidents and investigated. DoD did not agree with the GAO interpretation of what constitutes a legal investigation.

Inspector General, DoD

Inspector General, DoD, "Review of Department of Defense Policies and Procedures for Death Investigations," January 26, 1996. The review states that DoD had not adopted a standard policy and procedures for death investigations and instead relied on the investigations of the Military Departments. The Military Departments had effective policies, procedures, and training for criminal investigations conducted in death cases. The review recommended the issuance of DoD Instruction 5505.10, "Investigation of Noncombat Fatalities of Active Duty Members of the Armed Forces." The

Instruction was published on January 31, 1996. The review also made recommendations concerning improvement of procedures. Management generally agreed with the recommendations.

Other Reviews

Department of Health and Human Services Publication No. 96-103, "National Mortality Profile of Active Duty Personnel in the U.S. Armed Forces 1980-1993," November 15, 1996. The study was performed to provide a detailed summary of the causes of death among the U.S. workforce. The study issued by the National Institute for Occupational Safety and Health and DoD states that more Armed Forces personnel died on duty and off duty from illness, homicide, self-inflicted wounds, and unintentional injuries, than from hostile actions between 1980 and 1993, even though the number of deaths among Armed Forces personnel declined by 49 percent over the same period. The study urged that a concerted civilian and military public health effort aggressively address those causes through which intervention and prevention strategies could be implemented to save lives. No recommendations were made to DoD.

Appendix C. DoD Nonhostile Deaths From FY 1980 Through FY 1996

DoD publishes periodic summaries of all active duty deaths by branch of Service, cause of death, geographic location, type (hostile and nonhostile), and year of occurrence. The DoD Worldwide Casualty System data base maintained by the Office of the Secretary of Defense, Washington Headquarters Services, has provided this information since 1979. The primary source for securing this casualty information is DD Form 1300, "Report of Casualty." The following table shows the total nonhostile deaths, death rates per 100,000 individuals, for total nonhostile and accidental deaths, and how the deaths were categorized from FY 1980 through FY 1996. The table includes on- and off-duty deaths.

FY 1980 Through FY 1996 DoD Nonhostile Deaths

Fiscal Year	Total Nonhostile Deaths	Homicide	Illness	Suicide	Undetermined Cause	Accidents	Deaths Per 100,000 Individuals: Nonhostile	Deaths Per 100,000 Individuals: Accidents
1980	2,390	161	401	236	15	1,577	116.5	76.9
1981	2,420	160	473	242	9	1,536	116.2	73.8
1982	2,311	113	437	243	18	1,500	109.2	71.1
1983	2,196	114	413	235	25	1,409	103.4	66.4
1984	2,037	94	379	215	14	1,335	95.3	62.4
1985	2,011	97	400	273	26	1,215	93.5	56.5
1986	2,239	114	359	262	31	1,473	103.2	67.9
1987	1,953	97	397	263	25	1,171	89.8	53.9
1988	1,842	99	324	291	24	1,104	86.1	51.6
1989	1,678	59	301	221	40	1,057	78.8	49.6
1990	1,502	71	275	250	42	864	73.5	42.3
1991	1,639	108	322	232	46	931	82.5	46.9
1992	1,331	112	252	220	35	712	73.7	39.4
1993	1,236	87	216	241	25	667	72.5	39.1
1994	1,089	85	211	225	24	544	67.6	33.8
1995	1,049	59	163	237	22	568	69.1	37.4
1996	988	63	174	204	31	516	67.1	35.1
Total	**29,911**	**1,693**	**5,497**	**4,090**	**452**[1]	**18,179**		

[1]Deaths from undetermined causes are included in the nonhostile death rate.

Appendix D. Safety Resources

Combined budgets for safety centers and safety division have increased from $20.9 million in FY 1993 to $23.1 million in FY 1997. This funding is used to develop and manage Service accident prevention and education programs, develop safety related regulatory guidance and policy, and provide safety related technical assistance and evaluations. The amount does not include the cost of safety operations that are integral to military commands, installations, organizations, and units; and does not include the cost of safety designs and equipment that are integral to DoD systems. Because safety awareness training is combined with other operational activities at DoD locations, we could not determine the amount specifically designated for safety training. Many operations at those levels, such as inspections; occupational health clinics; and safety "stand downs" and training exercises, are related to safety issues. However, they are not necessarily funded as a safety program operation.

During FY 1997, the safety centers and safety division had a combined staffing of 561 people. That combined staffing level consisted of 270 military personnel and 291 civilians. It did not include safety personnel at commands, installations, organizations, or units. Personnel involved in safety at those locations may be dedicated entirely to local safety programs, or they may perform the safety function as a collateral duty to their normal job.

Appendix E. DoD Off-Duty Accidental Deaths From 1988 Through 1996

The Service safety centers and Service safety division collect data on DoD accidents. The table shows all accidental off-duty DoD deaths that occurred from 1988 through 1996. The table does not include deaths from illnesses, homicides, suicides, or undetermined causes.

Calendar Years 1988 Through 1996
Accidental DoD Deaths

Year	Motor Vehicle	Sports and Recreation	Other	Total
1988	657	54	66	777
1989	551	70	52	673
1990	500	50	61	611
1991	469	46	64	579
1992	345	44	58	447
1993	346	69	42	457
1994	319	35	45	399
1995	299	37	44	380
1996	302	38	35	375
Totals	**3,788**	**443**	**467**	**4,698**

Appendix F. Weighted and Unweighted Motor Vehicle Death Rates

Information on the civilian population was obtained from the United States Census Bureau. Civilian motor vehicle death information was obtained from the National Highway Traffic Safety Administration. Using the civilian population and motor vehicle deaths, we computed the accidental death rate per 100,000 individuals, for 17 through 40 year old personnel. We weighted the civilian motor vehicle deaths to reflect the same age and gender mix as the DoD population.

The military population was obtained from the Defense Manpower Data Center; and information on military motor vehicle deaths was obtained from the Service safety centers and Service safety division. Using the military population and motor vehicle deaths by age and gender, we computed the military death rate for 17 through 40 year old personnel. The table compares civilian weighted and DoD unweighted motor vehicle death rates per 100,000 individuals. The methodology used to weight the civilian statistics is explained in Appendix A.

Traffic Death Rate Comparisons per 100,000 Individuals

Year	Civilian Weighted	On- and Off- Duty DoD Unweighted
1988	42.9	33.6
1989	39.1	29.0
1990	38.6	27.4
1991	35.4	26.8
1992	31.2	22.6
1993	31.6	24.4
1994	31.1	24.0
1995	31.7	23.9
1996	30.8	25.5

Appendix G. Report Distribution

Office of the Secretary of Defense

Under Secretary of Defense (Comptroller)
  Deputy Chief Financial Officer
  Deputy Comptroller (Program/Budget)
Under Secretary of Defense for Personnel and Readiness
Assistant Secretary of Defense (Health Affairs)
Assistant Secretary of Defense (Public Affairs)
Deputy Under Secretary of Defense (Environmental Security)
Director, Defense Logistics Studies Information Exchange

Department of the Army

Auditor General, Department of the Army

Department of the Navy

Assistant Secretary of the Navy (Financial Management and Comptroller)
Auditor General, Department of the Navy
Superintendent, Naval Post Graduate School

Department of the Air Force

Assistant Secretary of the Air Force (Financial Management and Comptroller)
Auditor General, Department of the Air Force

Other Defense Organizations

Director, Defense Contract Audit Agency
Director, Defense Logistics Agency
Director, National Security Agency
  Inspector General, National Security Agency
Inspector General, Defense Intelligence Agency

Non-Defense Federal Organizations and Individuals

Office of Management and Budget
General Accounting Office
National Security and International Affairs Division
Technical Information Center
Health, Education, and Human Services

Chairman and ranking minority member of each of the following congressional committees and subcommittees:

Senate Committee on Appropriations
Senate Subcommittee on Defense, Committee on Appropriations
Senate Committee on Armed Services
Senate Committee on Governmental Affairs
House Committee on Appropriations
House Subcommittee on National Security, Committee on Appropriations
House Committee on Government Reform and Oversight
House Subcommittee on Government Management, Information, and Technology, Committee on Government Reform and Oversight
House Subcommittee on National Security, International Affairs, and Criminal Justice, Committee on Government Reform and Oversight
House Committee on National Security

Honorable John F. Kerry, U.S. Senate

Part III - Management Comments

Deputy Under Secretary of Defense (Environmental Security) Comments

ACQUISITION AND TECHNOLOGY

OFFICE OF THE UNDER SECRETARY OF DEFENSE

3000 DEFENSE PENTAGON
WASHINGTON, DC 20301-3000

22 MAY 1998

MEMORANDUM FOR DIRECTOR, READINESS AND LOGISTICS SUPPORT (DoDIG)

SUBJECT: Evaluation Report on Accidental Off-Duty Deaths in DoD (Project No. 7LF-5053)

In your April 10 memorandum, you requested comments on the draft of the report that SECDEF asked you to prepare in support of Senator Kerry's reaction to the Boston Globe series on "Deaths in the Military." Overall, we were pleased with the in-depth, professional, and impartial review of the Department's safety performance.

Your analysis substantiated what our internal oversight has observed over the years. It is reassuring to validate that the Department's leaders and the programs they implement provide Service Members a lower risk of accidental death than that which threatens similar non-military populations.

We concur fully in your findings and recommendation. Although there is no estimated monetary benefit reported, the benefits to the Service Members, to their families and friends, and to readiness are self-evident.

In response to your recommendation, we are preparing and coordinating a Department-wide statement for the SECDEF. In this statement, we hope to capture and display the personal policies and expectations that the SECDEF has spontaneously given voice to in a number of different forums. This action should set the tone of the DoD accident prevention efforts well into the future.

Sherri W. Goodman
Deputy Under Secretary of Defense
(Environmental Security)

Environmental Security *Defending Our Future*

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